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10/076,068	02/15/2002	Takayuki Hattori	401573/SOGA	8657

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EXAMINER

BARNES, CRYSTAL J

ART UNIT PAPER NUMBER

2121

DATE MAILED: 01/08/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

2

# Office Action Summary

Application No.

10/076,068

Applicant(s)

HATTORI ET AL.

Examiner

Crystal J. Barnes

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,8-11,13 and 15 is/are rejected.
- 7) ☒ Claim(s) 5-7,12,14 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Drawings*

2. The drawing changes were received on 15 February 2002. These drawing changes are acceptable.
3. The drawings are objected to because "TOD" in step 14-3 and "OBTAINEDF" in step 14-9, both in figure 14 are incorrect. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "communication line 78" on page 16 is not shown in figure 23. A

proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Figure 27 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### *Specification*

6. The abstract of the disclosure is objected to because No.2001-259863, field" should be "No. 2001-259863, filed" (insert space and correct spelling) on page 1 lines 3-4; "till" (first occurrence on page 17 last line) should be replaced with "until"; "power source 28a" should be power source 28" and "electric motor 21a" should be "electric motor 21" (see page 28 lines 8-9 and figure 8); "when" on page 30 line 13 should be capitalized; "PHS 81b" on page 43 line 7 should be "PHS

81" (see figure 18); "the: on page 50 line 6 should be capitalized. Correction is required. See MPEP § 608.01(b).

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Rejections - 35 USC § 102*

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-4 and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by USPN 6,567,730 B2 to Tanaka.

As per claim 1, the Tanaka reference discloses a state-of-device remote monitoring system comprising: an on-the-spot area (see column 3 line 33, "vehicle

diagnosis section A1"); and a management area (see column 3 line 34, "external diagnosis section A2"), said on-the-spot area ("vehicle diagnosis section A1") including: an electric device (see column 3 lines 38-40, "items of vehicle equipment 11"); a detector (see column 3 lines 40-42, "diagnosis data collector 12") for detecting a device state of said electric device ("items of vehicle equipment 11"); a first communication signal converter (see column 3 lines 46-50, "radio communication device 14") for converting detection data obtained by detection of said detector ("diagnosis data collector 12") into communication signals, and transmitting the communication signals; and a controller (see column 3 lines 43-45, "controller 13"), having a memory (see column 4 lines 15-18, "RAM") for storing the detection data obtained by the detection of said detector (see column 3 lines 43-45, "stores diagnosis data"), for storing with the detection data the device state (see column 4 lines 18-21, "data transmission instructing function") based on a preset detection start program (see column 3 lines 51-54, "time-clocking device 16 ... transmission timing"), and outputting the detection data stored in said memory to said first communication signal converter ("radio communication device 14") based on a preset communication start program that runs in correspondence with storage of the detection data (see column 3 lines 51-54, "time-clocking device 16 ...

radio transmission timing"), said management area ("external diagnosis section A2") including: a second communication signal converter (see column 4 lines 44-50, "external transceiver 22") for converting the communication signals received from said first communication signal converter ("radio communication device 14") into the detection data before; a maintenance tool (see column 4 lines 40-43, "analyzer 21") having a diagnostic/analytic program for analyzing the device state from the detection data converted by said second communication signal converter ("external transceiver 22"), and a maintenance database ("analyzer 21") storing data necessary for analysis by said diagnostic/analytic program and a diagnosed result; and a display unit (see column 3 line 55 and column 4 lines 21-23, "display 15") for displaying the diagnosed result obtained by the analysis by said maintenance tool ("analyzer 21").

As per claim 2, the Tanaka reference discloses further comprising a general purpose network (see column 4 lines 48-50, "public base stations Q1, O2 and public telephone circuit A3") for transmitting the communication signals transmitted from said first communication signal converter ("radio communication device 14") to said second communication signal converter ("external transceiver 22").

As per claim 3, the rejection of claim 1 is incorporated and further claim 3 contains limitations recited in claim 1; therefore claim 3 is rejected under the same rationale as claim 1.

As per claim 4, the Tanaka reference discloses said on-the-spot area ("vehicle diagnosis section A1") includes a mobile communication device (see column 6 lines 55-58, "vehicle telephone, portable telephone, PHS") for transmitting the radio signals based on the communication signals converted by said first communication signal converter ("radio communication device 14"), and said general-purpose network includes: at least one base station (see column 6 lines 43-50, "public base stations Q1, Q2") for receiving the radio signals of said mobile communication device ("vehicle telephone, portable telephone, PHS") and converting the radio signals into the communication signals; and a mobile communication network for transferring the communication signals converted by said base station ("public base stations Q1, Q2") to a public line network (public telephone circuit A3").

As per claim 13, the Tanaka reference discloses further comprising a mobile communication device (see column 4 lines 24-30, "vehicle telephone, portable telephone, PHS") for issuing abnormality information (see column 5 lines 64-65,



"fault location and cause") upon receiving the abnormality information ("fault location and cause"), wherein said maintenance tool ("analyzer 21") transmits, if the diagnosed result (see column 5 lines 66-67, "diagnosis result") from the detection data (see column 63-64, "received diagnosis data") shows an abnormality, the abnormality information ("fault location and cause") to said mobile communication device ("vehicle telephone, portable telephone, PHS").

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,567,730 B2 to Tanaka in view of USPN 6,006,147 to Hall et al.

As per claim 8, the Tanaka reference discloses, if said on-the-spot area is within an automobile, comprising: a mobile record terminal downloaded with the detection data stored in said memory by connecting a communication cable

disconnectable from and connectable to said first communication signal converter;  
and a mobile communication device ("vehicle telephone, portable telephone, PHS"),  
connected to said mobile record terminal, for converting the detection data  
downloaded into said mobile record terminal into the radio signals and transmitting  
the radio signals, wherein said general-purpose network includes at least one base  
station ("public base stations Q1, Q2") for receiving and converting the radio  
signals of said mobile communication device ("vehicle telephone, portable telephone,  
PHS") into the communication signals, and including a mobile communication network  
for transferring the communication signals converted by said base station ("public  
base stations Q1, Q2") to a public line network (public telephone circuit A3").

The Tanaka reference does not expressly disclose, if said on-the-spot area  
is within an automobile, comprising: a mobile record terminal downloaded with the  
detection data stored in said memory by connecting a communication cable  
disconnectable from and connectable to said first communication signal converter.

The Hall et al. reference discloses

(see columns 3-4 lines 60-9, "... tester 12 includes a data plug and two  
engagement receptacles ... translator 14 includes ... data connector and two

engagement posts ... the translator 14 can be easily engaged with the tester 12 ... and then easily disengaged from the tester 12 ... without the need for tools ...")

(see column 4 lines 10-16, "cable 42 ... translator housing 34 ... test plug 44 ... test receptacle 46 in a vehicle 48 having an electrical system that is to be tested.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to manually receive diagnosis data collected in the vehicle by engaging the tester/translator taught by the Hall et al. reference to the diagnosis data collector and controller taught by the Tanaka reference.

One of ordinary skill in the art would have been motivated to modify the vehicle diagnosis system taught by the Tanaka reference to include the translator and tester taught by the Hall et al. reference to add the capability of manually receiving diagnosis data collected in the vehicle in case of malfunction.

As per claim 9, the Tanaka reference does not expressly disclose, if said on-the-spot area is within an electric car including a battery for supplying electric power, the system comprises: a power source/communication cable disconnectable from and connectable to said battery, connected to a power source; and a power control device for charging said battery with electricity from said power source

device by connecting said power source/communication cable to said battery, downloading the detection data stored in said memory, and transferring the detection data to said general-purpose network.

The Hall et al. reference discloses

(see column 4 lines 17-29, "... associated current monitor 50 ... positive and negative leads 56, 58 ... battery post clip 60, 62 ...")

(see column 4 lines 34-38, "... monitor antenna 64 ... RF transceiving components ...")

(see column 7 lines 16-22, "... current sensor 112 ... monitor transceiver 110 ... leads 56, 58 ... vehicle battery 52.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the current monitor taught by the Hall et al. reference with the power control device of the present invention in order to manually diagnose electric vehicles engaging the tester/translator taught by the Hall et al. reference to the diagnosis data collector and controller taught by the Tanaka reference.

One of ordinary skill in the art would have been motivated to modify the vehicle diagnosis system taught by the Tanaka reference to include the translator

and tester taught by the Hall et al. reference to add the capability of manually receiving diagnosis data collected in electric vehicles in case of malfunction.

As per claim 10, the Tanaka reference does not expressly disclose said controller does not include said memory, detects a device state through said detector based on a preset detection start program if a communication route between said first communication signal converter and said general-purpose network is established, and outputs the detection data to said first communication signal converter based on a preset communication start program in accordance with the device state detected.

The Hall et al. reference discloses

(see column 9 lines 15-21, "tester 12 unsuccessfully attempts to transmit data ... retransmit the data ... period of storage for data which has not been transmitted ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to remove the memory from the controller so that diagnosis data was transmitted directly from the diagnosis data collector to the external diagnosis section.

One of ordinary skill in the art would have been motivated to remove memory from the controller to reduce cost and improve transmission speed.

As per claim 11, the Tanaka reference does not expressly disclose said maintenance tool outputs a state-of-device detection start command of the electric device to said controller at a predetermined time, and said controller executes the detection start program based on the state-of-device detection start command.

However, it would have been logically to one of ordinary skill in the art to modify the software program of the analyzer to alternately control of transmission timing of diagnosis data transmission commands generated by the controller.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the software program of the analyzer to alternately control of transmission timing of diagnosis data transmission commands generated by the controller so that the external diagnosis section could initiate diagnosis data transmission commands.

One of ordinary skill in the art would have been motivated to allow the external diagnosis section to initiate diagnosis data transmission commands in case of a malfunction in the vehicle diagnosis section.

As per claim 15, the Tanaka reference discloses further comprising a user maintenance terminal connected to said general-purpose network and issuing the data received via said general-purpose network, wherein said maintenance tool (see column 5 lines 63-67, "analyzer 21") is managed by an in-charge-of-maintenance company ("external diagnosis section") in charge of monitoring device state of the electric device ("vehicle equipment 11") and outputting the diagnosed result ("diagnosis result") based on said diagnostic/analytic program ("software program") to said maintenance terminal.

The Tanaka reference does not expressly disclose further comprising a user maintenance terminal connected to said general-purpose network and issuing the data received via said general-purpose network.

The Hall et al. reference discloses

(see column 4 lines 39-51, "... a system computer 66 is in wireless communication with the tester 12 for receiving communications ... and for transmitting ... to the tester 12 ...")

(see column 5 lines 9-12, "... signals received ... are sent via optical fiber ... Ethernet 76 to ... circuitry 78, and thence to the system computer 66.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the vehicle diagnosis system taught by the Tanaka reference to include the system computer taught by the Hall et al. reference to input data and to access local and remote databases and test modules.

One of ordinary skill in the art would have been motivated to input data and to access local and remote databases and test modules so that the external diagnosis section permitted operator control.

***Allowable Subject Matter***

12. Claims 5-7, 12, 14 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to remote monitoring systems in general:

USPN 3,603,881 to Thornton

USPN 4,163,218 to Wu

USPN 4,471,348 to London et al.

USPN 4,586,150 to Budziak et al.

USPN 5,573,090 to Ross

USPN 5,900,179 to Bilenko et al.

USPN 6,292,757 B1 to Flanagan et al.

USPN 6,311,105 B1 to Budike, Jr.

USPN 6,430,451 B1 to Takahashi et al.

USPN 6,552,661 B1 to Lastinger et al.

USPN 6,573,831 B2 to Ikeda et al.

USPN 6,656,119 B2 to Sasaki et al.

USSIR H000678 to Baker et al.

US Pub. No. 2002/0068983 A1 to Sexton

US Pub. No. 2002/0117986 A1 to Becerra et al.

JPPN 60035850 A to NATORI et al.

KR 2002090420 A to JANG et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 703.306.5448. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri can be reached on 703.305.0282. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.3900.

cjb  
December 23, 2003



**ANIL KHATRI**  
**SUPERVISORY PATENT EXAMINER**